

**SPATIAL MULTIPLEXING WITH ANTENNA
AND CONSTELLATION SELECTION FOR
CORRELATED MIMO FADING CHANNELS**

ABSTRACT OF THE DISCLOSURE

[0057] A multiple-in multiple-out (MIMO) system may use an antenna selection operation to determine an optimum number and subset of active antennas for communication over correlated fading channels. The system may use second-order statistics, such as correlation matrices determined at a receiver, to determine the optimal number of antennas and transmit constellations.